

PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION.

Improvements in or relating to Bottle Filling Machines.

We, FREDERICK WILLIAM SEMARK, trading as THE BREWERS' EQUIPMENT Co., of Nos. 21 to 23, Bishop Street, Birmingham, and JOHN HENRY ALLEN, of No. 48, 5 Willows Crescent, Birmingham, both British subjects, do hereby declare the nature of this invention to be as follows:—

This invention relates to machines for filling bottles with beer and other beverages, and more particularly is concerned with that kind or type of the said machines comprising a pan or reservoir wherein the liquid with which the bottles are to be filled is maintained at or about a constant level by a float valve, or otherwise, the said pan or reservoir having in combination therewith a plurality of pivoted syphon-like devices the shorter limbs of which depend into the liquid in the pan or reservoir, their longer limbs being external thereto, the bottles to be filled being passed by the operator on to the longer external limb of the syphon devices 25 and being held in the requisite position during the filling operation by the gripping of the neck of the bottles by spring clip or jaw devices provided in conjunction with each pivoted syphon-like device. 30 The shorter limbs of the syphon devices have at their inner ends a valve which is normally closed, that is to say, when there is no bottle on the external longer limb, and which opens automatically when a bottle is placed on the external limb and the syphon is turned on its pivot to bring the neck of the bottle into the clip, in a manner well understood.

Ordinarily the spring clip or jaw members hereinbefore referred to provided in conjunction with each syphon device consist of spring wire jaws or jaws under the control of coiled wire springs and these constructions are open to the objection 45 that when from various causes these spring wire members become defective their replacement is both troublesome and more or less expensive.

The present invention has for its object 50 to provide in conjunction with the syphon devices of machines of the kind or type hereinbefore referred to, clip devices so constructed that metallic springs are dis-

pensed with, and the invention consists of a bottle neck clip or gripping device embodying jaw members under the control of an india rubber ring or like elastic band. 55

In a convenient embodiment of the invention the clip comprises a pair of jaws obtained by stamping or pressing operations from sheet or bar metal, or otherwise made, each member of the pair having at one end thereof a hole or perforation and near its other end at one side or edge thereof a cut-away part or notch preferably of a V or angular formation. The said jaw members are pivotally mounted side by side and with their notched edges presented to each other, on a bracket adapted to be secured to the side of the liquid container or reservoir, the said bracket conveniently being formed by a horizontal extension of the bracket or plate which carries the bearings for the pivot of the syphon device in conjunction with which the clip is used, and the pivots being constituted by headed screw bolts passed through the holes in the ends of the jaw members and corresponding holes in the bracket. 60 65 70 75 80

The jaw members are slightly spaced apart and a pin or stud projecting upwardly from the bracket and between their presented edges limits the extent to which they can turn on their pivots towards one another. 85

Projecting upwardly from each pivoted jaw is a pin or stud, or pins or studs, the said studs being in alignment, and the jaws are held in the normal or closed position by an india rubber or other elastic ring or band which is stretched across the jaws and passed around the pins thereon, the tendency of the stretched elastic ring or band to contract to its normal dimensions serving to provide the spring or resilient pressure of the jaws on the neck of the bottle when the same is pushed between the jaws and into the gap formed by the presented notches near the outer ends of the said jaws in which gap the bottle neck is accommodated when the bottle is in position on the longer limb of the syphon device during the filling operation. 90 95 100 105

[Price 1/-]

If thought necessary or desirable the pins or studs on the jaw members around which the stretched elastic ring or band is anchored may have at their upper ends 5 overhanging parts or projections to prevent the elastic ring or band from inadvertently riding off the said pins or studs.

Preferably the extreme outer ends of the jaw members are rounded or chamfered to facilitate the entry of the neck of the bottle between the jaws which, as is well understood, are pressed apart as the bottle neck passes into position in the gap formed by the notched sections of the 10 jaws and the bottle neck is, when in position in the gap, firmly gripped by the jaws under the contractile action of the india rubber or other elastic ring or band.

The elastic rings or bands employed may be such as are ordinarily used as 20 washers on the stoppers of bottles and as there is always at hand in a bottling factory a plentiful supply of these rings, replacements of the rings on the jaws when they perish or lose their elasticity 25 in use can be very readily effected and does not require skilled or semi-skilled labour as is the case where metal spring devices are employed.

Dated this 1st day of December, 1927.

GEORGE SHAW, BOWKER &
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35, Temple Row, Birmingham,
Chartered Patent Agents.
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COMPLETE SPECIFICATION.

Improvements in or relating to Bottle Filling Machines.

30 We, FREDERICK WILLIAM SEMARK, trading as THE BREWERS' EQUIPMENT Co., of Nos. 21 to 23, Bishop Street, Birmingham, and JOHN HENRY ALLEN, of No. 48, Willows Crescent, Birmingham, both 35 British subjects, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

40 This invention relates to machines for filling bottles with beer and other beverages, and more particularly is concerned with that kind or type of the said machines comprising a pan or reservoir 45 wherein the liquid with which the bottles are to be filled is maintained at or about a constant level by a float valve, or otherwise, the said pan or reservoir having in combination therewith a plurality of 50 pivoted siphon-like devices the shorter limbs of which depend into the liquid in the pan or reservoir, their longer limbs being external thereto, the bottles to be filled being passed by the operator on to 55 the longer external limb of the siphon devices and being held in the requisite position during the filling operation by the gripping of the neck of the bottles by 60 spring clip or jaw devices provided in conjunction with each pivoted siphon-like device. The shorter limbs of the siphon devices have at their inner ends a valve which is normally closed, that is to say, when there is no bottle on the external 65 longer limb, and which opens automatically when a bottle is placed on the external limb and the siphon is turned on its pivot to bring the neck of the bottle into the clip, in a manner well under- 70 stood.

Ordinarily the spring clip or jaw members hereinbefore referred to provided in conjunction with each siphon device consist of spring wire jaws or jaws under the control of coiled wire springs and these 75 constructions are open to the objection that when from various causes these spring wire members become defective their replacement is both troublesome and more or less expensive.

The present invention has for its object to provide, in conjunction with the siphon devices of machines of the kind or type hereinbefore referred to, clip devices so constructed that metallic springs are dispensed with, and the invention consists of a bottle neck clip or gripping device embodying jaw members under the control of an india rubber ring or like elastic band.

The invention will now be described with particular reference to the accompanying sheet of drawings, wherein:—

Figure 1 is a front elevation of the bottle neck clip or gripping device.

Figure 2 is a vertical section taken on the plane indicated by the line 2—2 Figure 1, and

Figure 3 is a plan of Figure 1.

The clip comprises a pair of jaws 4 obtained by stamping or pressing operations from sheet or bar metal, or otherwise made, each member of the pair having at one end thereof a hole or perforation and near its other end at one side or edge thereof a cut-away part or notch 4^a of a V or angular formation. The said jaw members 4 are pivotally mounted side by side and with their notched edges presented to each other, on a bracket 5 10^b adapted to be secured to the side of the

liquid container or reservoir, not shown, the said bracket conveniently being formed by a horizontal extension of the bracket or plate 5^a which carries the bearings for the pivot of the siphon device in conjunction with which the clip is used. The pivots for the jaw members are constituted by headed screw bolts 6 passed through the holes in the ends of the jaw members and corresponding holes in the bracket 5.

The jaw members are slightly spaced apart and a pin 7 or stud projecting upwardly from the bracket 5 and between their presented edges limits the extent to which they can turn on their pivots towards one another.

Projecting upwardly from each pivoted jaw is a pin or stud 8 the said pins or studs 8 being in alignment, and the jaws are held in the normal or closed position by an india rubber or other elastic ring or band 9 which is stretched across the jaws and passed around the pins or studs 25 thereon, the tendency of the stretched elastic ring or band 9 to contract to its normal dimensions serving to provide the spring or resilient pressure of the jaws on the neck of the bottle when the same is 30 pushed between the jaws and into the gap formed by the presented notches 4^a near the outer ends of the said jaws in which gap the bottle neck is accommodated when the bottle is in position on the longer limb 35 of the siphon device during the filling operation.

If thought necessary or desirable the pins or studs 8 on the jaw members 4 around which the stretched elastic ring or 40 band 9 is anchored may have at their upper ends overhanging parts or projections to prevent the elastic ring or band 9 from inadvertently riding off the said pins or studs.

45 Preferably the extreme outer ends of the jaw members 4 are rounded or chamfered as at 4^b to facilitate the entry of the neck of the bottle between the jaws which, as is well understood, are pressed 50 apart as the bottle neck passes into position in the gap formed by the notched sections 4^a of the jaws and the bottle neck is, when in position in the gap, firmly gripped by the jaws under the contractile 55 action of the india rubber or other elastic ring or band 9.

The elastic rings or bands 9 employed may be such as are ordinarily used as washers on the stoppers of bottles and as 60 there is always at hand in a bottling factory a plentiful supply of these rings, replacement of the rings on the jaws when

they perish or lose their elasticity in use can be very readily effected and does not require skilled or semi-skilled labour as is the case where metal spring devices are employed.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A bottle neck clip or gripping device for use with the siphon devices of filling machines of the kind hereinbefore referred to, wherein the jaw members are controlled by an india rubber ring or like elastic band.

2. A bottle neck clip or gripping device for use with the siphon devices of filling machines of the kind hereinbefore referred to, wherein the jaw members are pivotally mounted on a bracket adapted to be secured to the liquid container or reservoir and wherein the jaw members are provided with pins or studs around which is passed an india rubber or other elastic ring or band, said ring or band normally serving to draw the jaw members together as and for the purpose specified.

3. A bottle neck clip or gripping device, according to Claim 2, wherein the pins or studs are provided at their upper ends with overhanging sections as and for the purpose specified.

4. A bottle neck clip or gripping device for use with the siphon devices of filling machines of the kind hereinbefore referred to, comprising in combination a bracket adapted to be secured to the liquid container or reservoir, a vertical portion of the said bracket adapted to carry the bearings for the siphon tube, a horizontal portion of said bracket, a pair of jaw members pivotally mounted on the horizontal portion of said bracket, a pin or stud projecting from each jaw member, an elastic ring or band adapted to be passed round said pins or studs for normally drawing the jaw members towards one another and means for limiting the degree of inward movement of the jaw members.

5. A bottle neck clip or gripping device for use with the siphon devices of filling machines, constructed, arranged and adapted for use substantially as herein described with reference to the accompanying sheet of drawings.

Dated this 31st day of August, 1928.

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(This Drawing is a reproduction of the Original on a reduced scale)

